

response is due on or before July 16, 2003. A check in the amount of \$930.00, in payment of the fee required under 37 C.F.R. § 1.17(a)(3), is filed concurrently herewith.

Kindly amend the application as follows:

IN THE CLAIMS

Please cancel claims 37, 39, 52 and 53, without prejudice.

Please amend claims 38, 40-42, 45, 46 and 48-51 as follows¹:

38. (Amended) A recombinant DNA molecule comprising the portion of a DNA sequence selected from the group consisting of the following subcloned fragments that hybridizes to at least one of the DNA inserts of Z-pBR322 (Pst)/HcIF-II-206 and Z-pBR322 (Pst)/HcIF-SN35-AHL6:

HchrIF-A, the subcloned HindIII fragment of chr 3 in E.coli HB101;

HchrIF-B, the subcloned EcoRI fragment of chr 12 in E.coli HB101;

HchrIF-C, the subcloned HindIII fragment of chr 12 in E.coli HB101;

HchrIF-D, the subcloned EcoRI fragment of chr 13 in E.coli HB101;

HchrIF-E, the subcloned EcoRI fragment of chr 23 in E.coli HB101;

HchrIF-F, the subcloned HindIII fragment of chr 23 in E.coli HB101;

¹ Applicant has attached hereto an Appendix of Amendments as Exhibit A that shows the amendments to the claims in the underline and bracket format. For the Examiner's convenience, applicant has also attached a copy of the pending claims (38, 40-51 and 54-56) after entry of this Amendment as Exhibit B.

HchrIF-G, the subcloned EcoRI fragment of chr 26 in E.coli HB101; and

HchrIF-H, the subcloned HindIII fragment of chr 26 in E.coli HB101.

40. (Amended) A recombinant DNA molecule comprising a DNA sequence selected from the group consisting of DNA sequences of the formula:

✓ TTACTGGTGGCCCTCCTGGTGCAGCTGCAAGTCAAGCTGCTCTGTGGGCTGTGAT
CTGCCTCAAACCCACAGCCTGGTAGCAGGAGGACCTGATGCTCCTGGCACAGATG
AGGAGAATCTCTCTTCTCCTGCTGAAGGACAGACATGACTTGGATTCCCCAG
GAGGAGTTGGCAACCAGTTCCAAAAGGCTGAAACCATCCCTGTCCTCCATGAGATG
ATCCAGCAGATCTCAATCTCTCAGCACAAAGGACTCATCTGCTGCTTGGATGAG
ACCCTCCTAGACAAATTCTACACTGAACCTACCAAGCAGCTGAATGACCTGGAAGCC
TGTGTGATACAGGGGTGGGGTGACAGAGACTCCCCTGATGAAGGAGGACTCCATT
CTGGCTGTGAGGAAATCTTCCAAAGAACATCACTCTATCTGAAAGAGAAAGAAATAC
AGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATCATGAGATCTTTCTTGTCA
ACAAACTTGCAAGAAAGTTAAGAAGTAAGGAA

and

TGTGATCTGCCTCAAACCCACAGCCTGGTAGCAGGAGGACCTGATGCTCCTGGCA
CAGATGAGGAGAATCTCTCTTCTCCTGCTGAAGGACAGACATGACTTGGATT
CCCCAGGAGGAGTTGGCAACCAGTTCCAAAAGGCTGAAACCATCCCTGTCCTCCAT
GAGATGATCCAGCAGATCTCAATCTCTCAGCACAAAGGACTCATCTGCTGCTTGG
GATGAGACCCCTCCTAGACAAATTCTACACTGAACCTACCAAGCAGCTGAATGACCTG
GAAGCCTGTGTGATACAGGGGTGGGGTGACAGAGACTCCCCTGATGAAGGAGGAC
TCCATTCTGGCTGTGAGGAAATCTTCCAAAGAACATCACTCTATCTGAAAGAGAAAG

AAATACAGCCCTTGTGCCTGGGAGGTTGTCAGAGCAGAAATCATGAGATCTTTCT
TTGTCAACAAACTTGCAAGAAAGTTAAGAAGTAAGGAA.

41. (Amended) A recombinant DNA molecule comprising a DNA sequence selected from the group consisting of DNA sequences of the formula:

ATGGCCCTGTCCTTTCTTACTGATGGCCGTGCTGGTGCTCAGCTACAAATCCATC
TGTTCTCTGGGCTGTGATCTGCCTCAGACCCACAGCCTGGTAATAGGAGGACCTTG
ATACTCCTGCAACAAATGGGAAGAATCTCTCATTCTCCTGCCTGAAGGACAGACAT
GATTCGGATTCCCCGAGGAGGGAGTTGATGCCACCAAGTCCAGAAGACTCAAGCC
ATCTCTGTCCTCCATGAGATGATCCAGCAGACCTCAATCTCTCAGCACAGAGGAC
TCATCTGCTGCTGGAACAGAGCCTCCTAGAAAAATTCCACTGAACCTTACCAAG
CAACTGAATGACCTGGAAGCATGTGTGATACAGGAGGTTGGGTGGAAGAGACTCCC
CTGATGAATGTGGACTCCATCCTGGCTGTGAGGAAATACTTCAAAGAACACTCTT
TATCTAACAGAGAAGAAATACAGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATC
ATGAGATCCCTCTCGTTCAACAAACTTGCAAAAAAGATTAAGGAGGAAGGAT

and

TGTGATCTGCCTCAGACCCACAGCCTGGTAATAGGAGGACCTGATACTCCTGCAA
CAAATGGGAAGAATCTCTCATTCTCCTGCCTGAAGGACAGACATGATTCGGATTC
CCCGAGGAGGAGTTGATGCCACCAAGTCCAGAAGACTCAAGCCATCTCTGTCCTC
CATGAGATGATCCAGCAGACCTCAATCTCTCAGCACAGAGGACTCATCTGCTGCT
TGGGAACAGAGCCTCCTAGAAAAATTCCACTGAACCTTACCAAGCAACTGAATGAC
CTGGAAGCATGTGTGATACAGGAGGTTGGGTGGAAGAGACTCCCCTGATGAATGTG
GAECTCCATCCTGGCTGTGAGGAAATACTTCAAAGAACACTCTTATCTAACAGAG

AAGAAATACAGCCCTTGTGCCTGGGAGGTTGTCAGAGCAGAAATCATGAGATCCCTC
TCGTTTCAACAAACTTGCAAAAAAGATTAAGGAGGAAGGAT.

42. (Amended) The recombinant DNA molecule according to any one of claims 38, 40 and 41, wherein said DNA sequence is operatively linked to an expression control sequence.

45. (Amended) A recombinant DNA molecule selected from the group consisting of C8-IFN- α 2, LAC-AUG(α 2) and β -lac-AUG(α 2).

46. (Amended) A host cell transformed with at least one recombinant DNA molecule according to any one of claims 38 and 40-45.

48. (Amended) A transformed host cell, wherein said host cell is E.coli HB101(Z-pBR322(Pst)/HcIF-II-206).

49. (Amended) A transformed host cell selected from the group consisting of HchrIF-A, wherein HchrIF-A is the subcloned HindIII fragment of chr 3 in E.coli HB101; HchrIF-B, wherein HchrIF-B is the subcloned EcoRI fragment of chr 12 in E.coli HB101; HchrIF-C, wherein HchrIF-C is the subcloned HindIII fragment of chr 12 in E.coli HB101; HchrIF-D, wherein HchrIF-D is the subcloned EcoRI fragment of chr 13 in E.coli HB101; HchrIF-E, wherein HchrIF-E is the subcloned EcoRI fragment of chr 23 in E.coli HB101; HchrIF-F, wherein HchrIF-F is the subcloned HindIII fragment of chr 23 in E.coli HB101;

HchrIF-G, wherein HchrIF-G is the subcloned EcoRI fragment of chr 26 in E.coli HB101; and HchrIF-H, wherein HchrIF-H is the subcloned HindIII fragment of chr 26 in E.coli HB101.

50. (Amended) A transformed host cell selected from the group consisting of E.coli DS410 (C8-IFN- α 2), E.coli DS410 (LAC-AUG(α 2)) and E.coli DS410 HB101 (β lac-AUG(α 2)).

51. (Amended) A method for producing a recombinant DNA molecule comprising a DNA sequence selected from the group consisting of DNA sequences of the formula:

TTACTGGTGGCCCTCCTGGTGCTCAGCTGCAAGTCAAGCTGCTCTGTGGGCTGTGAT /
CTGCCTCAAACCCACAGCCTGGTAGCAGGAGGACCTTGATGCTCCTGGCACAGATG /
AGGAGAATCTCTCTTCTCCTGCTGAAGGACAGACATGACTTGGATTCCCCAG /
GAGGAGTTGGCAACCAGTTCAAAAGGCTGAAACCATCCCTGTCCTCCATGAGATG /
ATCCAGCAGATCTTCAATCTCTCAGCACAAAGGACTCATCTGCTGCTTGGATGAG /
ACCCTCCTAGACAAATTCTACACTGAACCTCTACCAGCAGCTGAATGACCTGGAAGCC /
TGTGTGATACAGGGGTGGGGTGACAGAGACTCCCCTGATGAAGGAGGACTCCATT /
CTGGCTGTGAGGAAATACTTCAAAAGAACATCACTCTATCTGAAAGAGAAGAAATAC /
AGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATCATGAGATCTTTCTTGTCA /
ACAAACTTGCAAGAAAGTTAAGAAGTAAGGAA; /

TGTGATCTGCCTCAAACCCACAGCCTGGTAGCAGGAGGACCTTGATGCTCCTGGCA /
CAGATGAGGAGAACATCTCTTTCTCCTGCTGAAGGACAGACATGACTTGGATT /

CCCCAGGAGGAGTTGGCAACCAGTTCCAAAAGGCTGAAACCATCCCTGTCCTCCAT /
GAGATGATCCAGCAGATCTCAATCTCTCAGCACAAAGGACTCATCTGCTGCTTGG /
GATGAGACCCTCCTAGACAAATTCTACACTGAACCTACAGCAGCTGAATGACCTG /
GAAGCCTGTGTGATACAGGGGTGGGGTGACAGAGACTCCCCTGATGAAGGAGGAC /
TCCATTCTGGCTGTGAGGAAATACTTCAAAGAACATCACTCTATCTGAAAGAGAAAG /
AAATACAGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATCATGAGATCTTTCT /
TTGTCAACAAACTTGCAAGAAAGTTAAGAAGTAAGGAA; /

DH

ATGCCCTGCTCTTCTTACTGATGCCGTGCTGGTCTAGCTACAAATCCATC /
TGTTCTCTGGCTGTGATCTGCCTCAGACCCACAGCCTGGTAATAGGAGGACCTTG /
ATACTCCTGCAACAAATGGAAAGAACATCTCATTCTCCTGCCTGAAGGACAGACAT /
GATTCGGATTCCCCGAGGAGGAGTTGATGCCACCAAGTCCAGAACAGACTCAAGCC /
ATCTCTGCCTCCATGAGATGATCCAGCAGACCTCAATCTCTCAGCACAGAGGAC /
TCATCTGCTGCTGGAACAGAGCCTCTAGAAAAATTCCACTGAACCTTACCAAG /
CAACTGAATGACCTGGAAGCATGTGTGATACAGGAGGTTGGGTGGAAGAGACTCCC /
CTGATGAATGTGGACTCCATCCTGGCTGTGAGGAAATACTTCAAAGAACATCACTCTT /
TATCTAACAGAGAACAGAACATGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATC /
ATGAGATCCCTCTGTTCAACAAACTTGCAAAAAAGATTAAGGAGGAAGGAT; /

and

TGTGATCTGCCTCAGACCCACAGCCTGGTAATAGGAGGACCTGATACTCCTGCAA /
CAAATGGGAAGAACATCTCATTCTCCTGCCTGAAGGACAGACATGATTCGGATTC /

CCCGAGGAGGAGTTGATGCCACCAAGTCCAGAAGACTCAAGCCATCTCTGTCCTC
CATGAGATGATCCAGCAGACCTCAATCTCTCAGCACAGAGGACTCATCTGCTGCT
TGGGAACAGAGCCTCCTAGAAAAATTTCACGTAACTTACCACTGAACTGAATGAC
CTGGAAGCATGTGTGATACAGGAGGTTGGGTGGAAGAGACTCCCCTGATGAATGTG
GACTCCATCCTGGCTGTGAGGAAATACTCCAAAGAATCACTCTTATCTAACAGAG
AAGAAATACAGCCCTTGTGCCTGGAGGTTGTCAGAGCAGAAATCATGAGATCCCTC
TCGTTTCAACAAACTGCAAAAAGATTAAGGAGGAAGGAT,

comprising the step of culturing a host cell containing at least one recombinant DNA molecule of claim 40 or 41 under conditions in which the host cell replicates the recombinant DNA molecule.

Please add the following claim:

56. (Added) A method for producing a DNA molecule comprising a DNA sequence encoding an α -type interferon comprising the step of culturing a host cell containing a DNA molecule comprising the DNA sequence of claim 54 or 55 under conditions in which the host cell replicates the DNA molecule.

REMARKS

Applicant acknowledges with appreciation the Examiner's allowance of claims 53-55.

Applicant has cancelled claims 37, 39 and 52-53, without prejudice, and reserves the right to prosecute the subject matter of the cancelled claims in any future application